

The Claims

1. (Previously presented) A method for providing an extensible agent comprising:

receiving a request from a client;

determining one or more environment characteristics;

dynamically selecting at least a portion of a plurality of agent components based on the client request and the environment characteristics, the at least a portion of the plurality of agent components being selected using a relational knowledgebase that comprises a properties table of properties for dynamic agent component selection and an actions table of actions for processing; and

processing the client request using the selected agent components and according to one or more actions of the actions table that are planned and scheduled.

2. (Original) The method of Claim 1, each agent component comprising an object defined in an object-oriented programming language.

3. (Previously presented) The method of Claim 2, further comprising instantiating the selected agent component objects.

4. (Previously presented) The method of Claim 1, further comprising:
selecting one or more characteristics of the request; and
wherein dynamically selecting at least a portion of a plurality of agent components based on the client request comprises selecting at least a portion of agent components based on the selected request characteristics.

5. (Previously presented) The method of Claim 4, further comprising storing the selected request characteristics in one of the selected agent components.

6. (Original) The method of Claim 5, one of the selected agent components comprising embedded structured query language (SQL) operable to query a database.

7. (Original) The method of Claim 1, the client comprising a remote client and the client request is received through a web server.

8. (Previously presented) The method of Claim 7, further comprising communicating a web-enabled message to the remote client based on the processed request.

9. (Original) The method of Claim 2, at least a portion of the agent components comprising objects based on a common parent class, the common parent class comprising component messaging logic and component locating logic.

10. (Original) The method of Claim 1, wherein at least a portion of the plurality of agent components comply with Foundation for Intelligent Physical Agents (FIPA) standards.

11. (Previously presented) The method of Claim 3, further comprising registering each instantiated agent component object.

12. (Original) The method of Claim 1, wherein dynamically selecting at least a portion of a plurality of agent components based on the client request and the environment characteristics comprises:

automatically retrieving variable properties from a knowledgebase using the client request and the environment variables; and

selecting at least a portion of the plurality of agent components based on the retrieved variable properties.

13. (Original) The method of Claim 1, wherein dynamically selecting at least a portion of the plurality of agent components based on the client request and the environment characteristics comprises selecting at least a portion of the plurality of agent components based on a JAVA properties file.

14. (Original) The method of Claim 1, the selected portion of the plurality of agent components operable to be executed in a non-web-enabled environment and a web-enabled environment.

15. (Previously presented) The method of Claim 1, further comprising:
migrating the plurality of agent components to an environment prior to receiving the request from the client; and

wherein processing the client request using the selected agent components comprises automatically processing the client request using the selected agent components.

16. (Previously presented) Software for providing an extensible agent, the software being embodied in a computer-readable medium and when executed operable to:

receive a request from a client;

determine one or more environment characteristics;

dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics, the at least a portion of the plurality of agent components being selected using a relational knowledgebase that comprises a properties table of properties for dynamic agent component selection and an actions table of actions for processing; and

process the client request using the selected agent components and according to one or more actions of the actions table that are planned and scheduled.

17. (Original) The software of Claim 16, each agent component comprising an object defined in an object-oriented programming language.

18. (Previously presented) The software of Claim 17, further operable to instantiate the selected agent component objects.

19. (Previously presented) The software of Claim 16, further operable to select one or more characteristics of the request and wherein the software operable to dynamically select at least a portion of a plurality of agent components based on the client request comprises the software operable to select at least a portion of agent components based on the selected request characteristics.

20. (Previously presented) The software of Claim 19, further operable to store the selected request characteristics in one of the selected agent components.

21. (Original) The software of Claim 20, one of the selected agent components comprising embedded structured query language (SQL) operable to query a database.

22. (Original) The software of Claim 16, the client comprising a remote client and wherein the client request is received through a web server.

23. (Previously presented) The software of Claim 22, further operable to communicate a web-enabled message to the remote client based on the processed request.

24. (Original) The software of Claim 17, at least a portion of the agent components comprising objects based on a common parent class, the common parent class comprising component messaging and component location logic.

25. (Original) The software of Claim 16, wherein at least a portion of the plurality of agent components comply with Foundation for Intelligent Physical Agents (FIPA) standards.

26. (Previously presented) The software of Claim 18, further operable to register each instantiated agent component object.

27. (Original) The software of Claim 16, wherein the software operable to dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics comprises the software operable to:

retrieve variable properties from a knowledgebase using the client request and the environment variables; and

select at least a portion of the plurality of agent components based on the retrieved variable properties.

28. (Original) The software of Claim 16, wherein the software operable to dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics comprises the software operable to select at least a portion of the plurality of agent components based on a JAVA properties file.

29. (Original) The software of Claim 16, the selected portion of the plurality of agent components operable to be executed in a non-web-enabled environment and a web-enabled environment.

30. (Previously presented) The software of Claim 16, further operable to:
migrate the plurality of agent components to an environment prior to receiving the request from the client; and

wherein the software operable to process the client request using the selected agent components comprises the software operable to automatically process the client request using the selected agent components.

31. (Previously presented) A server comprising:
a memory operable to store a database and a knowledgebase, the knowledgebase comprising a plurality of component selection patterns; and

one or more processors collectively operable to:

receive a request from a client;

determine one or more environment characteristics;

dynamically select at least a portion of a plurality of agent components based on one of the plurality of component selection patterns, the pattern selected based on the client request and the environment characteristics, the at least a portion of the plurality of agent components being selected using the knowledgebase that comprises a properties table of properties for dynamic agent component selection and an actions table of actions for processing; and

access data in the database using the selected agent components and according to one or more actions of the actions table that are planned and scheduled.

32. (Original) The server of Claim 31, each agent component comprising an object defined in an object-oriented programming language.

33. (Original) The server of Claim 32, the processors further operable to instantiate the selected agent component objects.

34. (Original) The server of Claim 31, the processors further operable to select one or more characteristics of the request and wherein the processors operable to dynamically select at least a portion of a plurality of agent components based on the client request comprise the processors operable to select at least a portion of agent components based on the selected request characteristics.

35. (Original) The server of Claim 34, the processors further operable to store the selected request characteristics in one of the selected agent components.

36. (Original) The server of Claim 35, wherein accessing data in the database using the selected agent components is performed by one of the selected agent components comprising embedded structured query language (SQL).

37. (Original) The server of Claim 31, the client comprising a remote client and wherein the client request is received through a web server.

38. (Original) The server of Claim 37, the processors further operable to communicate a web-enabled message to the remote client based on the processed request.

39. (Original) The server of Claim 32, at least a portion of the agent components comprising objects based on a common parent class, the common parent class comprising component messaging and component location logic.

40. (Original) The server of Claim 31, wherein at least a portion of the plurality of agent components comply with Foundation for Intelligent Physical Agents (FIPA) standards.

41. (Original) The server of Claim 33, the processors further operable to register each instantiated agent component object.

42. (Original) The server of Claim 31, wherein the processors operable to dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics comprise the processors operable to:

retrieve variable properties from the knowledgebase using the client request and the environment variables;

selecting one of the component selection patterns based on the retrieved variable properties; and

select at least a portion of the plurality of agent components using the component selection pattern.

43. (Original) The server of Claim 31, wherein the processors operable to dynamically select at least a portion of a plurality of agent components based on the client request and the environment characteristics comprise the processors operable to select at least a portion of the plurality of agent components based on a JAVA properties file.

44. (Original) The server of Claim 31, the selected portion of the plurality of agent components operable to be executed in a non-web-enabled environment and a web-enabled environment.

45. (Original) The server of Claim 36, the processors further operable to:
migrate the plurality of agent components to an environment prior to receiving the request from the client; and

wherein the processors operable to process the client request using the selected agent components comprise the processors operable to automatically process the client request using the selected agent components.